~~S E C R E T~~

REPORT NO. [redacted]

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COUNTRY Poland/ East Germany

DATE DISTR. 30 Dec. 1958

SUBJECT Visit of Polish Team of Experts at East German Electronics Factories

NO. OF PAGES 4

PLACE ACQUIRED [redacted] 50X1

NO. OF ENCLS. (LISTED BELOW)

DATE ACQUIRED BY SOURCE [redacted] 50X1

SUPPLEMENT TO REPORT NO.

DATE OF INFORMATION [redacted]

THIS IS UNEVALUATED INFORMATION

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1. The PKPG [redacted] is responsible for seeing that technical information is exchanged between Poland and other Communist countries. Most of the actual work is done by the Biuro Wspolpracy z Zagranica (Bureau of Cooperation With Other Countries) for the exchange of visiting teams and the Biuro Dokumentacji Technicznej (Bureau of Technical Documentation) for the exchange of published literature. Two or three times each year PKPG has a (sesje) meeting with representatives of other Communistic countries to arrange for the exchange of visiting teams. These meetings are usually between Poland and one other country rather than a group type meeting.

2. Normally a Bureau of Cooperation with other countries exists in all ministries and is responsible for coordination between ministries as well as coordination between countries. Officially, they instruct laboratories and factories under their jurisdiction to disclose all information to visiting parties but unofficially they instruct them to withhold information concerning some of the important projects being done. These instructions, along with instructions unofficially put out by the Chief Director of plants being inspected, greatly decrease the true value of the exchange of visiting teams by various Communist countries.

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submitted the following list of subjects which he was interested in pursuing:

a. One- and two-band carrier telecommunications systems used on high voltage power lines.

b. One- and two-band power control systems used on high voltage power lines.

c. Use of selective automatic protection devices for high voltage power lines, i.e. if one overload or phase relay is activated others are automatically activated also.

d. Use of a telecontrol carrier system in connection with small power stations.

e. Other telephony systems were to be investigated but were purely of secondary interest.

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a. H. F. WERK IN BERLIN:

1. A visit was made to the Power Station Communications laboratory which is under the direction of Ing. LAUENROTH. Approximately 20 engineers and technicians are employed in this laboratory, developing a telemetric system which does not utilize vacuum tubes. They are using magnetic amplifiers in this development but are experiencing many difficulties since ±2% accuracy is the best that can be obtained. This project is to be completed in 1954 but Source believes that it will be impossible for them to do so.

2. LAURENROTH's laboratory has also just started development on a new telemetric system which employs a 24 contact switch tube. This system needs a band width of 0 to 4,800 cycles and is similar to the one recently developed by the Brown Boveri Company in Switzerland. This new system was originally to use square wave pulses but finally sine wave pulses were substituted due to the requirements of a great band width when square waves are employed.

50X1 this new system is three or four years in the future. 50X1

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3. Some work is being done on single side-band carrier systems. In fact, one small East German net presently exists and serves small feeder lines. It is in a test-only status and much trouble is being experienced.

4. Werk HF is making a remote control system for Warsaw's underground transportation system. It is to be delivered during the first part of 1954. In addition to this equipment, Werk HF is making approximately 10 other smaller remote control systems for Poland.

b. RFT TREPTOW WERKE IN BERLIN:

1. Has developed a portable transmitter-receiver unit which is to be sent to Russia. This unit has a frequency range of 50 kc. to 320 kc., is to be coupled onto high voltage lines for communications between power men in the field and their home station, and has a weight of 60 pounds. Only one has been made and is to be sent to Russia.

2. 50X1 it is also concerned with the production of line filter equipment, regulation relays, automatic gain control circuits and related items but he knows no details concerning these items.

6. RFT WERK - DRESDEN:

1.) This factory presently is concerned with the repair of radio broadcast receivers and the production of electronic measuring instruments such as voltmeters, vacuum tube voltmeters, high-powered pulse generators, volt meters and oscilloscopes. All of this equipment is of good quality.

2.) A special instrument based on high frequency pulse generator and oscilloscope is used in locating breaks in high voltage power lines. This equipment is supposedly very good. However, Ing. BARANOWSKY, Chief of Telecommunications over East German power lines, East Germany had no experience with this type of equipment. 50X1

3.) A UHF transmitter receiver unit, for use by police, has been developed by RFT Werk Dresden. The FM transmitter has an output of about 10 watts and operates on 3- to 5-meter wave lengths. 50X1

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7. RFT WERK ERFURT:

1.) This factory is divided into two parts with one section devoted to the production of vacuum tubes and the second concerned with the development of electronic measuring instruments. 50X1

2.) The electronics measuring instruments section of RFT Werk Erfurt is divided into a Low Frequency Laboratory and a High Frequency Laboratory.

a. The Low Frequency laboratory has developed a test receiver for measuring field strengths of signals between 100 kc.'s and 50 megacycles. They have also developed an ultrasonic (1 meg to 2.5 meg) deflectorscope for analyzing cast iron and steel. This instrument was displayed at the 1953 Leipzig Fair. In addition to the above instruments, the low frequency lab has developed a very poor distortion meter, a di-electric loss-measuring instrument, level meters, audio frequency

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oscillators, and beat frequency oscillators.

b. The High Frequency Laboratory has developed a quartz clock (not too accurate), an FM-AM signal generator that goes up to 200 megacycles (reportedly very good), and a short-wave quartz controlled signal generator for a frequency of 10 megacycles to 500 megacycles. No other projects are known to Source A.

8. CLAMANN & GRAHNERT, DRESDEN:

This private firm employs about 50 people in manufacturing measuring instruments. This production of vacuum tube voltmeters, RC oscillators, and electrical power meters is carried on within about a 500 square meter area housed in a three-storied brick building. Approximately 300 units are produced each year and a period of one year is required for the production of simple measuring instruments. [redacted] this company has 50X1
a very small capability insofar as the production of measuring instruments is concerned.

9. TRANSFORMATORENWERK KARL LIEBKNECHT:

This factory is concerned with the production of large power transformers, power generators, and large coupling coils. One type of high voltage generator is capable of generating a 2,500,000 volt spark and is to be used for the testing of insulators. No telecommunications equipment is made here.

10. REPARATUR WERK KLARA ZETKIN:

This is a large factory solely concerned with the repair of large power transformers and generators. Approximately 1,000 people are employed in this factory.